### **C1 Problem Statements**

### **Finding**

The LBNL job hazard analysis process design and implementation does not sufficiently ensure that all hazards at the activity level are systematically identified, analyzed, and controlled, as needed to ensure compliance with 10 CFR 851, Worker Safety and Health Program, DOE Policy 450.4, Safety Management System Policy, and the LBNL Health and Safety Manual.

### Problem Statement C1-1

The JHA process as designed by EH&S does not systematically identify tasks, analyze hazards, and establish required controls at the activity level necessary to fully comply with 10 CFR 851 (Worker Safety and Health Program), DOE Policy 450.4 (Safety Management System Policy), and PUB-3000 (LBNL Health and Safety Manual).

### Problem Statement C1-2

The JHA process as implemented by LBNL does not systematically identify tasks, analyze hazards, and establish required controls at the activity level to fully comply with 10 CFR 851 (Worker Safety and Health Program), DOE Policy 450.4 (Safety Management System Policy), and PUB-3000 (LBNL Health and Safety Manual).

#### **C2 Problem Statements**

#### Finding

The LBNL non-radiological exposure assessment program does not include adequate exposure assessment procedures and protocols and does not perform sufficient qualitative and quantitative exposure assessments to fully meet the requirements of the LBNL Worker Safety and Health Plan and 10CFR851, Worker Safety and Health Program.

#### Problem Statements - Design C2-1:

- 1) LBNL EHS Division has not established a nonradiological Exposure Assessment Program that includes adequate procedures and protocols to fully conform to the requirements of 10CFR851 and the LBNL Worker Safety and Health Plan.
- LBNL EHS Division does not have a formalized program for Baseline Assessment that fully conforms to the requirements of 10CFR851 and the LBNL Worker Safety and Health Plan.

### Problem-Statements – Implementation C2-2:

- 1) LBNL EH&S Division has not fully implemented a program that performs sufficient exposure assessments to fully meet the requirements of 10CFR851 and the LBNL Worker Safety and Health Plan.
- 2) LBNL line management organizations, in collaboration with the EH&S Division have not fully implemented a nonradiological Exposure Assessment Program that performs sufficient exposure assessments to meet the requirements of 10CFR851 and the LBNL Worker Safety and Health Plan.

### **C3 Problem Statement**

### **Finding**

LBNL has not established and implemented sufficient radiation protection requirements in the areas of radiological work authorizations, contamination control, radiological postings and boundary control, technical basis documentation, and training, as needed to ensure adequate radiological safety consistent with all applicable requirements of 10CFR835, *Occupational Radiation Protection*.

### Problem Statement C3-1

LBNL radiation protection programs, as designed by the EH&S Division, do not fully meet the requirements of 10CFR835, specifically with reference to radiological work authorizations, contamination control, postings, boundary control, technical basis documentation and training.

#### Problem Statement C3-2

LBNL did not fully implement the institutional requirements established to meet 10CFR835.

#### **C4 Problem Statements**

#### Finding

LBNL has not established effective processes and rigorous documents that consistently and effectively communicate safety expectations and requirements to LBNL employees and contractors, as required by Criteria 1, 4 and 5 of DOE Order 414.1C, *Quality Assurance*.

#### Problem Statement C4-1:

LBNL has not established effective processes and rigorous documents for environment, safety and health management that meet the requirements under Criteria 1, 4, and 5 of DOE Order 414.1C, Quality Assurance.

### Problem Statement C4-2:

LBNL has not established a process to consistently and effectively communicate environment, safety and health expectations and requirements to its employees and contractors.

#### **C5 Problem Statements**

### Finding

LBNL has not ensured that all of the requirements of LBNL PUB-3000, Chapter 8, *Electrical Safety*, Chapter 18, *Lockout/Tagout and Verification*, and NFPA 70E, *Standard for Electrical Safety in the Workplace*, for arc flash protection, PPE, and zero voltage verification have been effectively implemented.

### Problem Statement C5-1

Facilities Division work processes do not ensure full implementation of electrical safety at the activity level.

### Problem Statement C5-2

Facilities Division work processes do not ensure full implementation of Lockout/Tagout (LOTO) at the activity level.

### **D1 Problem Statements**

#### Finding

LBNL has not established and implemented a fully effective self assessment program with sufficient rigor to ensure that safety programs and performance are consistently and accurately evaluated with deficiencies identified to ensure continuous improvement, as required by DOE Order 226.1A, *Implementation of Department of Energy Oversight Policy*, and by DOE Order 414.1c, *Quality Assurance*.

### Problem-Statement D1-1

LBNL has not established a fully effective ESH self-assessment program as required by DOE O226.1A/414.1C.

### Problem-Statement D1-2

LBNL has not implemented fully effective ESH self-assessment activities as required by DOE O 226.1A/414.1C.

#### **D2 Problem Statements**

## **Finding**

The LBNL issues management program is not fully effective in ensuring that ES&H related events, injuries, conditions, and program and performance deficiencies are rigorously categorized, analyzed, and corrected, and recurrence controls are established as required by DOE Order 226.1A, *Implementation of Department of Energy Oversight Policy*, and by DOE Order 414.1C, *Quality Assurance*.

### Problem Statement D2-1

The Office of Contract Assurance (OCA) has not established a fully effective issues management program that ensures that issues are rigorously categorized and corrected and that recurrence controls are established as required by DOE Order 414.1C, Quality Assurance, and DOE Order 226.1A, Implementation of DOE Oversight Policy.

## Problem Statement D2-2

LBNL implementation of the institutional issues management program is not effective in ensuring that issues are rigorously categorized, analyzed, corrected and that recurrence controls are established as required by DOE Order 414.1C, *Quality Assurance*, and DOE Order 226.1A, *Implementation of DOE Oversight Policy*.

#### **D3 Problem Statements**

#### Finding

LBNL has not established sufficient processes nor implemented a fully effective investigation and reporting program for occupational injuries and illness to identify ISM deficiencies and implement effective recurrence controls as required by DOE Manual 231.1-1A, *Environment Safety and Health Reporting Manual*, DOE Order 414.1C, *Quality Assurance* and DOE Order 226.1A, *Implementation of Department of Energy Oversight Policy*.

#### Problem Statement D3-1

LBNL EHS Division has not established sufficient processes for investigating and reporting occupational injuries and illnesses to effectively identify ISM deficiencies, causes and recurrence controls as required by DOE Manual 231.1-1A, Environment Safety and Health Reporting Manual, DOE Order 414.1C, Quality Assurance and DOE Order 226.1A, Implementation of Department of Energy Oversight Policy.

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### Problem Statement D3-2

LBNL has not implemented sufficient processes for occupational injury and illness investigation and reporting to effectively identify ISM deficiencies, causes and recurrence controls as required by DOE Manual 231.1-1A, *Environment Safety and Health Reporting Manual*, DOE Order 414.1C, *Quality Assurance* and DOE Order 226.1A, *Implementation of Department of Energy Oversight Policy*.

#### **D4 Problem Statements**

# **Finding**

LBNL has not established and implemented a fully effective lessons learned program that demonstrates application of some pertinent externally generated lessons learned as required by DOE Order 210.2, DOE Corporate Operating Experience Program, and DOE Order 226.1A, *Implementation of Department of Energy Oversight Policy*.

# Problem Statement D4-1

The Office of Contract Assurance (OCA) has not sufficiently established how some externally generated lessons learned are reviewed for applicability to LBNL and incorporated in the institutional Lessons Learned Program as required by DOE Order 210.2, DOE Corporate Operating Experience Program, and DOE Order 226.1A, Implementation of DOE Oversight Policy.

### Problem Statement D4-2

LBNL implementation of the institutional Lessons Learned Program has not effectively demonstrated how some externally generated lessons learned are reviewed for applicability to LBNL and incorporated into the institutional Lessons Learned Program as required by DOE Order 210.2, *DOE Corporate Operating Experience Program*, and DOE Order 226.1A, *Implementation of DOE Oversight Policy*.

### Problem Statement D4-3

LBNL implementation of the institutional Lessons Learned Program has not effectively demonstrated how some lessons learned are incorporated into LBNL work processes as required by DOE Order 210.2, DOE Corporate Operating Experience Program, and DOE Order 226.1A, Implementation of DOE Oversight Policy.

#### **E1 Problem Statements**

# **Finding**

LBNL has not implemented an effective process to ensure that: all hazardous chemicals are captured in the CMS; all secondary containers, except for immediate use, are appropriately labeled with the identity of the hazardous

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chemical and appropriate warnings; and chemicals are properly stored, as required by 29 CFR 1910.1200, *Hazard Communication*; 29 CFR 1910.1450, *Occupational Exposure to Hazardous Chemicals in Laboratories*; or the LBNL CHSP.

# Problem Statement E1-1

LBNL has not implemented an effective process to ensure that all hazardous chemicals are **captured** in the CMS as required by 29 CRF 1910.1200, *Hazard Communication*; 29 CFR 1910.1450, *Occupational Exposure to Hazardous Chemicals in Laboratories*; or the LBNL CHSP.

### Problem Statement E1-2

LBNL has not implemented an effective process to ensure that all secondary containers, except for immediate use, are appropriately **labeled** with the identity of the hazardous chemical and appropriate warnings as required by 29 CRF 1910.1200, *Hazard Communication*; 29 CFR 1910.1450, *Occupational Exposure to Hazardous Chemicals in Laboratories*; or the LBNL CHSP.

### Problem Statement E1-3

LBNL has not implemented an effective process to ensure that all chemicals are properly **stored** as required by 29 CRF 1910.1200, *Hazard Communication*; 29 CFR 1910.1450, *Occupational Exposure to Hazardous Chemicals in Laboratories*; or the LBNL CHSP.